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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,872	01/24/2002	Josep Fontdecaba Buj	Q68112	8688

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
WASHINGTON, DC 20037

EXAMINER

ENGLISH, PETER C

ART UNIT	PAPER NUMBER
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3616

DATE MAILED: 10/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/031,872

Applicant(s)

FONTDECABA BUJ, JOSEP

Examiner

Peter C. English

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species A (Figs. 6 and 21-27) in Paper No. 7 is acknowledged. The traversal is on the ground(s) that a restriction of a dependent claim is only proper after an assessment of the prior art. This is not found persuasive because the different species lack the same or corresponding special technical feature for the reasons given in item 3 of the previous Office action. Further, the examiner's position is supported by the prior art rejections set forth below, which show that there is no shared special technical feature. The requirement is still deemed proper and is therefore made FINAL.
2. Claims 2-4 and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 67, mentioned at page 14, line 4.
4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description:
 - 36, shown in Fig. 14.
 - 23A-23D, shown in Figs. 17, 18 and 20.
 - 48, shown in Fig. 21.
5. The drawings are objected to because:
 - In Figs. 11-13, reference numbers 26A, 26B are used for 2 segments of the same transmission element. However, in Figs. 17-20, these reference numbers are used for two different transmission elements.
 - In Fig. 20, "the lower occurrence of "23D" should be "24D".

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Reference number 43 is used for three separate and distinct embodiments of the hydraulic cylinder. The first is shown in Fig. 21, the second in Figs. 22-24 and the third in Fig. 25.

In Fig. 21, the left-hand occurrence of "49" should be "50".

In Fig. 22, each occurrence of "67" should be "68". See Fig. 26 and page 14, lines 10-11.

6. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the following features must be shown or canceled from the claims: two central devices connected through a conduit (claim 6, lines 1-2); a two-way regulator inserted in the conduits between hydraulic rams of conjugated wheels (claim 10, lines 2-3); a central cavity and double side cavities connected to expansion chambers through electro valves (claim 11); means for changing the height of the vehicle (claim 14); and devices with variable volume cavities shunt connected to each hydraulic conduit (claim 16). No new matter should be entered.

7. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

8. The abstract of the disclosure is objected to because: it consists of more than one paragraph; and it includes legal phraseology, such as "means" (lines 5 and 10). Correction is required. See MPEP § 608.01(b).

9. The specification is REplete with awkward and confusing language, and grammatical errors. In fact, the specification is written in such poor English that portions of it are barely readable. Examples are given below. A complete and thorough revision of the entire specification is required.

In the abstract, at line 2, "cooperates the vehicle suspension or substituting it".

In the abstract, at line 3, "wheeling sets".

In the abstract, at line 4, "being such wheeling sets related two-to-two".

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In the abstract, at lines 7-8, "reduce the roll and heading".

In the abstract, at line 9, "mechanic".

In the abstract, at line 10, "mechanic resilient elements".

On page 1, lines 8-21 contain a single run-on sentence.

At page 1, line 10, "wheeling sets".

At page 1, lines 11-12 and 18-19, "that cooperating with the...or substituting it".

At page 1, line 14, "being such wheeling sets related two to two".

At page 1, line 24, "the shakes".

At page 1, line 29, "security of ride".

At page 1, line 30, "vehicle security during cornering".

At page 1, line 32, "heading".

At page 2, line 2, "increment the stability".

At page 2, line 7, "the a vehicle".

At page 2, line 9, "comfort along the ride".

At page 2, lines 10-11, "being this caused by".

At page 2, lines 20-21, "existing front...with right".

At page 2, line 23, "related between them".

At page 2a, lines 5-6, "each wheel related two-to-two".

At page 2a, line 6, "having the last two patents a..."

At page 3, line 1, "at certain extent with".

At page 3, line 4, "it is desired an anti-roll system".

At page 3, line 8, "it has been developed the anti-roll".

At page 3, line 10, "consisting this device in the arrangement".

At page 3, line 10, "the wheeling sets".

At page 3, line 12, "adequate them".

At page 3, lines 15-21 are confusing and not easily understood.

At page 3, line 26, "a receiving element that associated with".

At page 3, lines 27-28, "direct transforming element".

At page 3, line 29, "inverse transforming element".

At page 3, lines 30-31, "take effect onto a second wheeling set".

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10. The specification is objected to because:

At page 2, line 14, "patents 2.840.387" should be "Patent No. 2,840,387". Further, similar corrections should be made to the references to the other patents/publications on pages 2 and 2a.

At page 9, line 8, "B with D" should be "B with C".

At page 11, line 13, "later" should be "former".

At page 11, line 18, "26" should be "26A, 26B".

At page 12, line 5, "23" should be "24A-24D".

At page 12, line 6, "24" should be "24D".

At page 12, line 24, "and coaxial compartment 49 and 50" should be "compartment 50 and a coaxial compartment 49".

At page 13, line 5, "57" should be "52". See line 8.

At page 13, line 9, "55B" should be inserted after "piston".

At page 13, line 18, "62" should be inserted after "fluid".

At page 13, line 18, "46" should be inserted after "spring".

At page 13, line 18, "two last cases" should be "last case".

At page 13, line 29, "55" should be deleted.

At page 13, line 33, "61" should be inserted after "conduits".

At page 14, line 1, "65" should be inserted after "rods".

At page 14, line 21, "72" should be inserted after "springs".

Claim Objections

11. Claims 1 and 5-17 are objected to because:

The reference numbers that appear in claim 1 do not correspond with the elected invention.

In claim 1, at lines 5-6, "and comprise receiving element" is grammatically incorrect.

In claim 1, at line 14, "trasmission" should be "transmission".

In claim 1, at line 14, "resiliency provides" is grammatically incorrect.

In claim 5, at line 3, "dyagonally oposed" should be "diagonally opposed".

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In claim 5, at lines 3-4, "cavity as to provide" is grammatically incorrect.

In claim 5, at line 5, "device that allow" is grammatically incorrect.

In claim 5, at line 8, "trasmission" should be "transmission".

In claim 5, at line 8, "resiliency provides" is grammatically incorrect.

Claims 12 and 13 should end with a period.

In claim 17, at line 1, "claim" should be inserted before "8".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

12. Claims 6, 8, 10, 11, 12 and 14-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification fails to provide a detailed description of the following features: two central devices connected through a conduit (claim 6, lines 1-2); a two-way regulator inserted in the conduits between hydraulic rams of conjugated wheels (claim 10, lines 2-3); a central cavity and double side cavities connected to expansion chambers through electro valves (claim 11); means for changing the height of the vehicle (claim 14); and devices with variable volume cavities shunt connected to each hydraulic conduit (claim 16). Further, none of these features are shown in the drawings.

13. Claims 1 and 5-17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The elected claims are REplete with awkward, confusing and indefinite language. Examples are given below. A complete and thorough revision of all of the elected claims is required.

In claim 1, the phrases "specifically to be..." (line 1) and "specially..." render the claim indefinite because it is unclear whether the limitations that follow these phrases are part of the claimed invention, or simply preferred options.

In claim 1, at line 2, the term "wheeling sets" is unconventional and not understood.

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In claim 1, the terms “the suspension” (line 3), “its vertical forces” (lines 6-7), “the first” (line 11), “such transmission means” (lines 12-13), “the vehicle body” (line 13), “the trasmission means” (line 14) and “the suspension main resilient component” (lines 15-16) lack proper antecedent basis.

In claim 1, at lines 3-4, “that cooperating with the suspension of the vehicle or substituting it” is confusing and not understood.

In claim 1, at lines 7-8, “direct transforming element from these vertical forces into horizontal forces” is confusing and not easily understood.

In claim 1, at lines 8-9, “which in turn are transmitted to an inverse transforming element from the horizontal forces into vertical forces” is confusing and not easily understood.

In claim 1, at lines 11-12, “he former in the first wheeling set” is confusing and not easily understood.

In claim 1, at lines 14-15, it is unclear what is meant by “the suspension main resilient component”.

Claim 1 is inaccurate because the limitation recited at lines 12-15 does not pertain to the elected invention. The suspension system shown in Figs. 6 and 21-27 does not include transmission means that are connected to the vehicle body by a resilient element”. Note that the hydraulic cylinder 43 (see Figs. 21 and 22) is the “direct transforming element” (see line 7) recited in claim 1.

In claim 5, the terms “the transmission means of forces” (lines 1-2), “each dyagonally oposed wheel” (lines 2-3), “each conduit” (line 3), and “the hydraulic fluid” (line 5) lack proper antecedent basis.

In claim 5, at line 4, “some resilient component individual to the wheel” is vague and confusing.

In claim 5, it is unclear what the relationship is between the “central device” (lines 4-5) and the “central resilient element” (line 6).

In claim 5, at lines 6-7, “can be” is vague and ambiguous.

In claim 5, at line 7, “a third pneumatic cavity” is indefinite because a “first” and “second” cavity have not been previously recited.

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The elected invention is not described as having a “pneumatic cavity” and a “central resilient element connected to the vehicle body”, as is recited in claim 5.

In claim 6, the terms “the two central devices” (line 1), “the two resilient elements” (lines 2-3), “the two sets of diagonal transmission elements” (line 3), “the two central resilient elements” (line 4), and “the resilient elements on each single effect ram” (lines 4-5) lack proper antecedent basis.

In claim 6, at line 5, “each single effect ram connected to the wheels” is inaccurate since each ram is not connected to more than one wheel.

In claim 7, at line 3, “the ends of that set” is confusing. Further, this would appear to be inaccurate since the ends of cylinder 52 are not closed.

In claim 7, at line 3, “finding inside” is vague and confusing.

In claim 7, the terms “the larger diameter piston” (line 4), “the larger central cylinder” (lines 4-5), “the smaller diameter piston” (line 5), “the corresponding smaller cylinder” (lines 5-6), “the smaller and central cavities” (line 7), “the hydraulic conduits” (line 8), “the side cavity on the larger cylinder” (lines 9-10), and “the diagonally opposed pistons” (line 13) lack proper antecedent basis.

In claim 7, lines 7-8 are inaccurate because the central cavity 56 is not connected to the conduits 61.

In claim 7, at line 11, “resilient elements” is inaccurate because there is only one resilient element 46.

In claim 7, at line 11, the alternative expression “and/or” renders the claim indefinite.

In claim 7, it is unclear what the relationship is between the “central cavity” (line 7) and the “expansion chamber” (line 12). Note that cavity 56 is not an expansion chamber.

In claim 7, at lines 12-13, “that opposes to...get closer” is confusing and not easily understood.

Claim 9 is indefinite because it attempts to replace the limitations found in the previous claims with alternative limitations. Note the language “is substituted by” (line 2) and “the new rams come to substitute” (line 4).

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

15. Claim 1 (as best understood) is rejected under 35 U.S.C. 102(b) as being anticipated by Rohdenburg (DE 2810629). Rohdenburg discloses an anti-roll and anti-pitch suspension system comprising: hydraulic rams 11-14 extending vertically between the four vehicle wheels and the vehicle body; a flow distributor (shown at the bottom of Figs. 2 and 3) extending horizontally, the flow distributor having two pistons 8, 8 and four cavities 31-34; and conduits 21-24 connecting the hydraulic rams 11-14 to the cavities 31-34. The flow distributor interconnects diagonally opposed pairs of the hydraulic rams 11-14 to prevent rolling and pitching motion of the vehicle.

16. Claims 1, 5 and 6 (as best understood) are rejected under 35 U.S.C. 102(e) as being anticipated by Heyring et al. '098 (US 6,270,098). Heyring et al. '098 discloses an anti-roll and anti-pitch suspension system comprising: hydraulic rams 1-4 extending vertically between the four vehicle wheels and the vehicle body; hydropneumatic chambers 5-8 coupled to the hydraulic rams 1-4; a flow distributor 13 extending horizontally, the flow distributor having four pistons 22-25, four hydraulic cavities 26-29, four pneumatic cavities 30-33, and passages 36, 37 connecting respective pairs of the pneumatic cavities 30-33; and conduits 14-17 connecting the hydraulic rams 1-4 to the hydraulic cavities 26-29. The flow distributor 13 interconnects

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diagonally opposed pairs of the hydraulic rams 1-4 to prevent rolling and pitching motion of the vehicle. Note also the embodiment of Fig. 3, which has only three pneumatic cavities 30, 31, 44.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1, 5-7, 10, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai (US 5,486,018) in view of Heyring et al. '098 (US 6,270,098) and Rohdenburg (DE 2810629). Sakai discloses an anti-roll and anti-pitch suspension system comprising: hydraulic rams 102, 102 extending vertically between the vehicle wheels and the vehicle body; a flow distributor 115 having two pistons 122, 122, two hydraulic cavities 148, 155, and one pneumatic cavity 129 with a fill orifice 135; conduits 118, 119 connecting the hydraulic rams 102, 102 to the hydraulic cavities 148, 155; and a two-way flow regulator 117 connecting the conduits 118, 119. As shown in Figs. 10 and 12, the flow distributor(s) 115 and flow regulator(s) 117 interconnect diagonally opposed pairs of the hydraulic rams 102 to prevent rolling and pitching motion of the vehicle. Note also the embodiment of Fig. 5 which has opposed hydraulic cavities 211, 212 and a central pneumatic cavity 206. Note further the embodiment of Fig. 22 which has a double piston 458.

Sakai fails to teach that the flow distributor is horizontal. Heyring et al. '098 teaches a flow distributor 13 extending horizontally. Rohdenburg also teaches a flow distributor (shown at the bottom of Figs. 2 and 3) extending horizontally. From these teachings of Heyring et al. '098 and Rohdenburg, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakai by mounting the flow distributor horizontally so that the flow distributor will be in an "out-of-the-way" position, i.e., the flow distributor will not interfere

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with the other vehicle components. Further, such a modification involving a mere change in orientation is generally considered to be within the level of ordinary skill in the art.


Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tschanz, Heyring, Masamura, Heyring et al. (WO 95/23076) and Weiss teach anti-roll and anti-pitch suspension systems.

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter C. English whose telephone number is 703-308-1377. The examiner can normally be reached on Monday through Thursday (7:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 703-308-2089. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9326 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.


Peter C. English
Primary Examiner
Art Unit 3616
10/27/03

pe
October 27, 2003